



*Bureau of State Laboratory Services*  
*Office of Laboratory Licensure, Certification & Training*

1740 W. Adams, Room 203  
Phoenix, Arizona 85007  
(602) 364-0720  
(602) 364-0758 FAX  
1-800-952-0374

JANE DEE HULL, GOVERNOR  
CATHERINE R. EDEN, DIRECTOR

**FAX TRANSMITTAL SHEET**

**DATE:** July 01, 2002

**TO:** Laboratory Director and QA Manager

**FROM:** Wesley B. Press, Bureau Chief

**Subject:** Information Update #75

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**NOTE:** If any of the pages are missing, please call 1-800-952-0374, (602) 364-0734 or (602) 364-0732.

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JANE DEE HULL, GOVERNOR  
CATHERINE R. EDEN, DIRECTOR

(602) 364-0758 FAX  
Technical Support Hot-Line 1-800-952-0374  
E-mail: [pachary@hs.state.az.us](mailto:pachary@hs.state.az.us)  
<http://www.hs.state.az.us/lab/license/tech/infoup.htm>

## Information Update

July 01, 2002

Update #75

1. During recent inspections of laboratories performing chemistry compliance testing using chromatographic instrumentation (inorganic and organic), it has been observed that several laboratories are using instrument software that does not save the integrations on peaks that were used to calculate the data. Pursuant to A.A.C. R9-14-601.37, the definition of "Records" means all written, recorded and electronic documentation necessary to reconstruct all laboratory activities that produce data and includes all information relating to the laboratory's equipment, analytical test methods and related activities. Pursuant to A.A.C. R9-14-617.B, "A licensee shall maintain records and reports of compliance testing and the ability to reproduce all electronic data for at least 5 years from the date of compliance testing." Pursuant to A.A.C. R9-14-617.E7, these records must include "The actual results of compliance testing, including all raw data, work sheets, and calculations performed." Since a peak's integration is a critical element in the calculation of the data, a laboratory cannot use instrumentation software that does not allow an inspector to evaluate the appropriateness of the computer or manual integration.
2. In our last Information Update we announced a tentative plan to present a one-day workshop on Basic Quality Assurance and Quality Control on August 27, 2002. So far we have only received six responses for this workshop. We need approximately 50 people in order for us to cover our expenses. If there is not enough interest we will be canceling the class. If you are interested in attending this workshop please send a fax by July 12, 2002, to either Prabha Acharya or David Winters at (602) 364-0758. The course agenda is:

Quality Assurance ..... (2 hours)

- ▶ What is quality assurance?
- ▶ The application of quality assurance
- ▶ Documentation of test methods
- ▶ Examples of quality assurance principles

General Quality Control Protocol ..... (3 hours)

- ▶ Why perform spiking?
- ▶ Methods of standards addition
- ▶ Benefits of on-going statistical analysis
- ▶ Control charts, limits calculations
- ▶ Maintenance, standards and reagents logbooks

General Chemistry principles ..... (3 hours)

- ▶ Gravimetric techniques
- ▶ Titration standardizations
- ▶ Colorimetric automated and manual operations
- ▶ Instrumental calibration and verification
- ▶ Extractions documentation
- ▶ Digestions documentation

3. Due to several requests we are considering presenting an Advanced QA/QC Workshop on August 28, 2002. Ms. Marlene Moore from Advanced Systems Inc. will be the presenter for this workshop as well. The cost for this workshop is \$125.00. If you are interested in attending the workshop please send a fax by July 12, 2002, to either Prabha Acharya or David Winters at (602) 364-0758. We will proceed with the preparation for the workshop if we have enough commitments to cover our costs.

The course is directed to quality assurance officers, laboratory managers, and testing supervisors, analysts, and data reviewers. The objective of the course is to present various methods for determining when QA/QC problems occur during data collection activities. These problems are often presumed to be limited to the test method while other factors also contribute to the data generation. A sound quality assurance program helps to ferret out these QA/QC problems and prevent their reoccurrence. The course provides guidance on the review of QA/QC requirements to acquire technically and legally defensible environmental data from laboratory operations.

The course will discuss the following:

- ▶ Fundamentals of quality assurance and quality control practices
- ▶ Examples of applied quality assurance principles
- ▶ Data review of matrix spike, control samples and calibration standards
- ▶ Demonstration of the use of statistical analysis for identifying problem areas
- ▶ Review of sensitivity issues related to detection limits and quantitation limits
- ▶ Review of chemistry principles related to the corrective actions for chromatography, spectrometry and other techniques
- ▶ Review of chemistry principles: instrumental calibration and verification, spectrometry data review, chromatography data review (retention time,

background, integration parameters and practices)

- ▶ Review of support system: manual and electronic data transfer, training

4. If you have any questions regarding the Information Updates, or if you have any technical questions that need clarification, please call or send e-mail to Prabha Acharya, Program Manager, Technical Resources and Training, at the Laboratory Licensure numbers/address. Copies of the Information Updates can now be found at our internet address:

<http://www.hs.state.az.us/lab/license/tech/infoup.htm>